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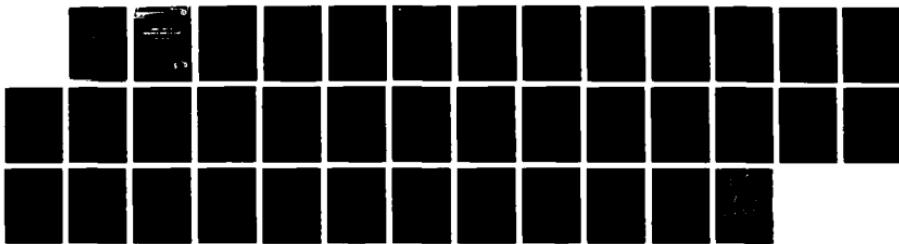
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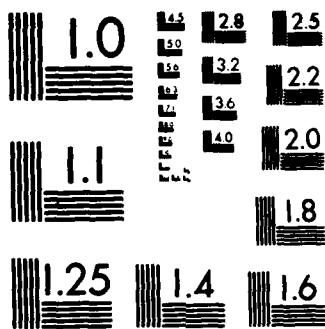
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# DIRECTORY OF RESEARCH PUBLICATIONS

- NINTH EDITION -

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## FOREWORD

This directory lists research publications produced by the Naval Environmental Prediction Research Facility (NEPRF) since the command was established in 1971. Abstracts of the last calendar year's publications also are provided.

The following identification information is given:

- (1) Report number assigned by NEPRF;
- (2) Government accession (AD) number where assigned;
- (3) Date of publication;
- (4) The publication's title, author(s), and number of pages

Publications are listed in sequence by type (see key to letter prefixes on first page of listings), report number, and year published. ←

Requests for copies of individual publications for official use may be directed to:

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While in print, copies of publications will be supplied from stocks on hand. An asterisk (\*) by a report's number indicates the publication is out of print and no longer available for distribution from NEPRF.

Registered, qualified users may request copies from:

Director  
Defense Technical Information Center (DTIC)  
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This ninth edition of January 1988 incorporates and supersedes all previous listings/editions

Report Number	AD Number	Report Date	Title -- Author(s) -- Pages
TP 1-71	739-702	Dec 1971	Large-Scale 'Turnover' in the Oceans -- S. Larsen, D. Dale, T. Laevastu -- 36 pp
TP 1-72	739-364	Jan 1972	A Summary of the U.S. Navy Program and FY 1971 Progress in Weather Modification and Control -- Environmental Prediction Research Facility -- 72 pp
TP 2-72	738-847	Jan 1972	The Effects of Oceanic Fronts on Properties of the Atmospheric Boundary Layer -- T. Laevastu, K. Rabe, G. Hamilton -- 54 pp
TP 3-72*	745-759	Mar 1972	A Description of the EPRF Hydrodynamic-Numerical Model -- T. Laevastu, K. Rabe -- 58 pp
TP 3A-72	745-760	Mar 1972	Appendices to ENVPREDRSCHFAC Technical Paper No. 3-72 Entitled A Description of the EPRF Hydrodynamical-Numerical Model -- Environmental Prediction Research Facility -- 34 pp
TP 4-72	746-451	Jul 1972	Numerical Modeling of the Growth of Ice Crystals, Graupel, and Hail -- E. Hindman, D. Johnson -- 56 pp
TP 5-72	746-130	May 1972	Geographic and Monthly Variation of Rapid Intensification and Low-Latitude Weakening of Tropical Cyclones of the Western North Pacific Ocean -- S. Brand -- 36 pp
TP 6-72	746-131	May 1972	Changes in the Characteristics of Typhoons Crossing the Philippines -- S. Brand, J. Bleloch -- 38 pp
TP 7-72*	746-880	Jul 1972	Speed of Tropical Storms and Typhoons After Recurvature in the Western North Pacific Ocean -- L. Burroughs, S. Brand -- 43 pp

Listed publications are identified by the following letter prefixes:

AR -- Applications Report  
 CPN -- Computer Programming Note  
 CR -- (NEPRF) Contractor Report  
 TM -- Technical Memorandum

TN -- Technical Note  
 TP -- Technical Paper  
 TR -- Technical Report

\* Indicates Out of Print

Report Number	AD Number	Report Date	Title -- Author(s) -- Pages
TP 8-72	751-579	Jun 1972	The Mean Winds of the Upper Troposphere Over the Central and Eastern Pacific -- J. Sadler -- 29 pp
TP 9-72*	522-652L	Sep 1972	The Validity of Forecasts of Ballistic Wind and Density for Fleet Ballistic Missile Systems, 1971-1972 Spring, Fall and Winter Case Studies: Eurasia and Eastern Test Range -- D. Schertz, P. Lowe -- 81 pp
TP 10-72	761-620	Sep 1972	A Numerical Study in Optimum Track Ship Routing Climatology -- F. Nagle -- 174 pp
TP 11-72*	524-343L	Dec 1972	The Effects of Subthermocline Ducts on the Propagation of Sound -- T. Laevastu, P. Wolff -- 50 pp
TP 12-72	907-418	Dec 1972	Monsoon Meteorology, by Colin S. Ramage; A Digest for Africa and Adjoining Indian Ocean Waters -- L. Brody -- 80 pp
TP 13-72*	757-328	Oct 1972	A Study of Numerical Simulation of Maritime Fog -- D. Feit -- 46 pp
TN 1*	---	Apr 1972	Computation of Flushing and Other Pollution Problems in Pearl Harbor with Hydrodynamical-Numerical (HN) Models -- Environmental Prediction Research Facility -- 21 pp
TN 2	776-231	Apr 1972	Coastal Sea-Air Interactions and the Extent of Coastal Influence -- Environmental Prediction Research Facility -- 26 pp
TN 3	776-226	Apr 1972	A Description of Linear and Nonlinear Computational Instability -- D. Haney -- 11 pp
TN 4	776-227	Jun 1972	Estimating Wind Speed Changes at Land/Sea Boundaries -- R. Cormier -- 10 pp
TN 5	776-228	Jun 1972	Visibility Calculations for Microphysical Computer Models -- D. Johnson -- 29 pp
TN 6	776-229	Jul 1972	A Bibliography of Selected Publications on Mediterranean Meteorology -- O. Haney -- 33 pp

Report Number	AD Number	Report Date	Title -- Author(s) -- Pages
CEN 1	A-011-119	Jan 1972	NODCXBT Subroutine for CDC 1604 -- K. Rabe -- 6 pp
CEN 2	A-012-938	Jan 1972	NODCECD Subroutine for CDC 1604 -- K. Rabe -- 5 pp
CEN 3	A-011-409	Jan 1972	Basic Zoom Program - Extraction of a Portion of Hemispheric Analyses and Interpolation to a New Grid of Desired Size, Location, and Orientation -- G. Wiese -- 32 pp
CEN 4	A-011-410	Sep 1972	STATPROG Subroutines for CDC 1604 -- C. Simpson -- 22 pp
TR B2-0272-001(CSU)*	741-717	Feb 1972	Diagnostic Study of the Planetary Boundary over the Oceans -- W. Gray (Colorado State University) -- 99 pp
TR S1-0972-002(SRI)	757-814	Sep 1972	Further Development of Objective Methods for Registering Landmarks and Determining Cloud Motions from Satellite Data -- D. Wolf, R. Endlich, D. Hall (Stanford Research Institute) -- 82 pp
TP 1-73	758-007	Jan 1973	The 1972 Typhoon Analog Program (TYFOON-72) J. Jarrell, R. Wagoner -- 44 pp
TP 2-73	764-859	Mar 1973	Tropical Cyclones of the North Indian Ocean -- J. Sadler, R. Gidley -- 62 pp
TP 3-73	766-797	Mar 1973	The Low-Level Structure of Weak Tropical Waves - A Preliminary Report -- R. Fett, R. Nagle, W. Mitchell -- 26 pp
TP 4-73	767-031	Jun 1973	The Typhoons of October 1970 in the South China Sea: Intensification, Decay and Ocean Interaction -- C. Ramage -- 49 pp
TP 5-73	767-030	Jun 1973	State of the Sea Around Tropical Cyclones in the Western North Pacific Ocean -- S. Brand, J. Bleloch, D. Schertz -- 32 pp
TP 6-73	767-934	Sep 1973	Oceanic Fog--A Numerical Study -- E. Barker -- 74 pp
TP 7-73*	771-379	Sep 1973	Handbook for Forecasters in the Bay of Bengal -- M. Cumming -- 170 pp

Report Number	AD Number	Report Date	Title -- Author(s) -- Pages
TP 8-73	769-538	Oct 1973	Changes in the Characteristics of Typhoons Crossing the Island of Taiwan -- S. Brand, J. Bleloch -- 21 pp
TP 9-73	776-232	Dec 1973	The Evaluation of Hong Kong Harbor as a Typhoon Haven -- D. Mautner, S. Brand -- 130 pp
TP 10-73	775-616	Dec 1973	Potential Cumulus Rainfall Modification -- Panama Canal Zone -- P. Lowe -- 18 pp
TN 7	772-085	Sep 1973	Computation of Tidal Currents in the Vicinity of S. Stefano Island -- K. Rabe -- 24 pp
TN 8	772-093	Nov 1973	Coastal Sea-Air Interactions and the Extent of Coastal Influence -- T. Laevastu -- 32 pp
TN 9	772-094	Nov 1973	A Model of Circulation and Dispersion in Pearl Harbor -- S. Larson -- 32 pp
CPN 5	A-011-411	Jan 1973	Mediterranean Sea-Surface Temperature Analysis Program - MEDSST -- A. Anderson, S. Larson, L. I'Anson -- 121 pp
CPN 6	A-011-412	Jan 1973	Program BTREPORT -- A. Anderson, S. Larson -- 80 pp
CPN 7	A-011-413	Feb 1973	Mediterranean Mixed Layer Depth Analysis Program - MEDMLD -- A. Anderson -- 62 pp
CPN 8	A-011-414	Feb 1973	The WAVE32 Program -- S. Larson, A. Anderson -- 59 pp
CPN 9	A-011-415	Feb 1973	The MLDZOOM Program -- S. Larson, A. Anderson -- 34 pp
CPN 10	A-035-170	Jul 1973	Ocean Climatology Extraction and Adjustment Program for the Mediterranean Program SOVEL -- T. Laevastu -- 22 pp
CPN 11	A-011-416	Nov 1973	Program GRAPHIC -- C. Simpson, D. Johnson -- 36 pp
CPN 12	A-011-417	Dec 1973	Subroutine SKENTLP -- J. Ficke -- 12 pp

Report Number	AD Number	Report Date	Title -- Author(s) -- Pages
TR 81-0673-003 (ESC) *	767-026	May 1973	Satellite Observations of Anomalous Local Wind Events in the Mediterranean Region -- J. Meneely, E. Merritt (Earth Satellite Corporation) -- 138 pp
TR 81-0873-004 (ESC)	770-208	Aug 1973	The NIMBUS 5 ESMR and its Application Storm Detection -- R. Sabatini, E. Merritt (Earth Satellite Corporation) -- 51 pp
TR 1-73 (ODSI)	770-207	Sep 1973	Extending the Computerized Typhoon/Tropical Storm Prediction Program (Typhoon 72) Toward Seven Days -- (Ocean Data Systems, Inc.) -- 115 pp
TR 2-73 (CSC)	773-964	Nov 1973	Organizational Structures for Constant Resolution Earth Data Bases -- P. Beaudet, F. Chan, L. Goldshlak (Computer Sciences Corporation) -- 190 pp
TR 3-73 (ARA)	774-524	Sep 1973	Development of Digital Enhancement Techniques Applicable to Direct Readout (APT) Meteorological Satellite Images -- I. Tamches, N. Kelknap (Applied Research Associates, Inc.) -- 123 pp
TP 1-74	774-683	Jan 1974	Tropical Cyclone Movement Forecasts Based on Observations from Satellites -- R. Fett, S. Brand -- 70 pp
TP 2-74	777-429	Mar 1974	Using Helicopters to Clear Fog: A Numerical Study -- D. Johnson, E. Barker, P. Lowe -- 38 pp
TP 3-74	777-958	Feb 1974	A Numerical Simulation of Warm Fog Dissipation by Electrically Enhanced Coalescence -- P. Tag -- 51 pp
TP 4-74	778-316	Mar 1974	The Computation of Saturation Vapor Pressure -- P. Lowe, J. Ficke -- 27 pp
TP 5-74*	777-406	Mar 1974	A Three-Parameter Model for Limited Area Forecasting -- L. Bengtsson -- 112 pp
TP 6-74	A-000-267	Apr 1974	An Evaluation of the Harbors of Kaohsiung and Chilung (Keelung), Taiwan as Typhoon Havens -- M. Brown -- 108 pp

Report Number	AD Number	Report Date	Title -- Author(s) -- Pages
TP 7-74	781-259	May 1974	A Numerical Study of Clearing Warm Fog by Using Hygroscopic Seeding in Conjunction with Helicopter Downwash -- P. Tag -- 40 pp
TP 8-74	781-324	May 1974	Cost Effectiveness of Typhoon Forecasts Improvements -- S. Brand, J. Blelloch -- 31 pp
TP 9-74	782-364	May 1974	A Role of the Tropical Upper Tropospheric Trough in Early Season Typhoon Development -- J. Sadler (University of Hawaii) -- 54 pp
TP 10-74	785-245	Jul 1974	Computation of Real-Time Currents off Southern California with Multi-Layer Hydrodynamical-Numerical Models -- T. Laevastu, G. Hamilton -- 72 pp
TP 11-74	786-347	Aug 1974	A Tropical Cyclone Analog Program for the North Indian Ocean -- S. Brand, J. Long, J. Blelloch, G. Hamilton -- 20 pp
TP 12-74	A-000-088	Aug 1974	Monsoonal Influences on the Annual Variation of Tropical Cyclone Development -- C. Ramage (University of Hawaii) -- 34 pp
TP 13-74	786-699	Aug 1974	The Effect of Utilizing Empirically Derived Values of Coalescence Efficiency in a Microphysical Cloud Model -- P. Tag -- 38 pp
TP 14-74	787-481	Sep 1974	Mesoscale Feedback from the Ocean to the Atmosphere in Coastal and Oceanic Frontal Regions -- T. Laevastu, G. Hamilton -- 46 pp
TP 15-74	A-004-620	Oct 1974	Description of the Optimized EPRF Multi-Layer Hydrodynamical-Numerical Model -- R. Bauer -- 66 pp
TP 16-74	A-001-271	Oct 1974	A Tropical Cyclone Analog Program for the Southwest Indian Ocean -- S. Brand, J. Blelloch, J. Long -- 20 pp
TN 10	778-609	Jan 1974	A Vertically Integrated Hydrodynamical/Numerical Model (W. Hansen Type): Model Description and Operating/Running Instruction -- Environmental Prediction Research Facility -- 69 pp

Report Number	AD Number	Report Date	Title -- Author(s) -- Pages
TN 11	778-619	Jan 1974	A Multilayer Hydrodynamical-Numerical Model (W. Hansen): Model Description and Operating/Running Instructions -- T. Laevastu -- 60 pp
TN 12	778-610	Jan 1974	Computation of Tides, Currents and Dispersal of Pollutants in Lower Bay and Approaches to New York with Fine and Medium Grid Size Hydrodynamical-Numerical Models -- T. Laevastu, M. Clancy, A. Stroud -- 57 pp
TN 13	778-617	Jan 1974	Computation of Tides, Currents and Dispersal of Pollutants in the New York Bight from Block Island to Atlantic City with Large Grid Size, Single and Two-Layer Hydrodynamical-Numerical Models -- T. Laevastu, R. Callaway A. Stroud, M Clancy -- 84 pp
TN 14	777-048	Mar 1974	Summaries and Abstracts of Tropical Publications of the Navy Weather Research Facility and Environmental Prediction Research Facility, 1968 to Feb 1974 -- Environmental Prediction Research Facility -- 20 pp
TN 15	778-618	Mar 1974	Typhoon and Tropical Storm Intensity Forecasts for 24, 48 and 72 Hour Using Statistical Regression Equations -- R. Elsberry, G. Coltrane, P. Krueger -- 26 pp
TN 16	779-005	Apr 1974	A Fine Mesh Sea-Level Pressure Analysis Scheme Incorporating Effects of Elevation and Terrain -- L. Brody -- 31 pp
CPN 13	A-035-169	Mar 1974	Users Guide to UPDATE -- J. Long -- 16 pp
CPN 14	787-480	Sep 1974	Users Guide for Direct Readout Data Converter (DRDC) -- G. Hunolt -- 127 pp
CPN 15	A-005-310	Sep 1974	Program COATEM -- B. van der Bijl (Compass Systems, Inc.) -- 17 pp
CPN 16	A-005-311	Sep 1974	Program TRUWIND -- B. van der Bijl (Compass Systems, Inc.) -- 7 pp
CPN 17	A-005-312	Sep 1974	Program ROGMAP -- R. Bauer, B. van der Bijl (Compass Systems, Inc.) -- 20 pp

Report Number	AD Number	Report Date	Title -- Author(s) -- Pages
CPN 18	A-005-321	Sep 1974	A Ray Trace Program Package for the CDC 1604 Computer -- B. van der Bijl (Compass Systems, Inc.) -- 36 pp
CPN 19	A-005-322	Oct 1974	Program PLOTS (HN Model Pen Plots) -- R. Bauer, B. van der Bijl (Compass Systems, Inc.) -- 50 pp
TR 1-74 (ERT)*	A-001-300	Jan 1974	Oceanographic Studies Using Satellite Data: Detection of Near-Shore Phenomena in ERTS Imagery -- C. Bowley, J. Barnes (Environmental Research & Technology, Inc.) -- 121 pp
TR 2-74 (SRI)	779-331	Nov 1973	Objective Methods for Determining Cloud Motions from Satellite Data -- D. Hall, F. Tomlin, D. Wolf (Stanford Research Institute) -- 45 pp
TR 3-74 (ODSI)*	780-423	Apr 1974	Survey of Pacific Theatre Satellite Data Users -- W. Hubert (Ocean Data Systems, Inc.) -- 100 pp
TR 4-74 (CDC)*	780-772	Mar 1974	Objective Methods for Locating the Center of Tropical Storms -- D. Dartt, M. Ulistad, R. Weinberg (Control Data Corporation) -- 16 pp
TR 5-74	783-547	May 1974	The Application of the NIMBUS 5 ESMR to Sea Surface Wind Determination -- R. Sabatini (Earth Satellite Corporation) -- 80 pp
TR 6-74 (ERT)*	A-001-092	Jun 1974	Mapping of Sea Surface Temperature by the NOAA-2 Satellite -- J. Cogan, J. Willand (Environmental Research & Technology, Inc.) -- 72 pp
TR 7-74 (ODSI)	787-021	Jul 1974	Survey of Atlantic Theatre Satellite Data Users -- W. Hubert (Ocean Data Systems, Inc. -- 112 pp
TP 1-75	A-008-346	Jan 1975	Preliminary Investigation of the Monthly and Seasonal Variation of Total Mass of the Atmosphere of the Northern Hemisphere and its Possible Use as a Partial Measure of Water Vapor Content Change of the Atmosphere -- W. Rudloff, T. Laevastu, J. Harding, S. Larson, G. Britton -- 17 pp

Report Number	AD Number	Report Date	Title -- Author(s) -- Pages
TP 2-75	A-006-255	Jan 1975	An Investigation of Interactions Between Double Clouds Using a Two-Dimensional Numerical Model -- W. Sweet, P. Lowe -- 110 pp
TP 3-75	A-007-301	Feb 1975	Summary Report of Hydrodynamical-Numerical (HN) Model Workshop and AGU Topical Meeting: Hydrodynamical-Numerical Models for Coastal and Open Ocean Areas -- T. Laevastu -- 93 pp
TP 4-75	A-008-158	Mar 1975	A Maritime Boundary Layer Model for the Prediction of Fog -- E. Barker -- 51 pp
TP 5-75	A-024-271	Nov 1975	Handbook for Forecasters in the Mediterranean Weather Phenomena of the Mediterranean Basin; Part 1: General Description of the Meteorological Processes -- E. Reiter -- 344 pp
TP 6-75	A-009-530	Mar 1975	The Navy's Analog Scheme for Forecasting Tropical Cyclone Motion over the Northeastern Pacific Ocean -- J. Jarrell, C. Mauck, R. Renard -- 27 pp
TP 7-75	A-010-792	Mar 1975	Monthly Mean Evaporation and Surface Winds over the Northern Hemisphere Oceans and Their Year-To-Year Variations -- S. Larson, T. Laevastu -- 50 pp
TP 8-75	A-010-122	Mar 1975	A 26-Year Time Series of Monthly Mean Winds Over the Oceans: Part 1 - A Statistical Verification of Computed Surface Winds Over the North Pacific and North Atlantic -- S. Larson -- 89 pp
TP 9-75	A-011-817	May 1975	A Statistical and Spectral Analysis of the Air-Sea Interactions at OWS NOVEMBER -- K. Rabe, R. Bourke -- 89 pp
TP 10-75	A-010-123	Apr 1975	A 26 Year Time Series of Monthly Mean Winds Over the Ocean: Part II - Monthly Anomalies at Selected Points in the North Pacific -- S. Larson -- 104 pp

Report Number	AD Number	Report Date	Title -- Author(s) -- Pages
TP 11-75	---	---	Unpublished
TP 12-75	A-012-369	Apr 1975	Further Development of a 3-7 Day Typhoon Analog Forecast Model for the Western Pacific -- W. Yogi, J. Long, J. Steuckert (Ocean Data Systems, Inc.) -- 37 pp
TP 13-75	A-010-121	May 1975	An Evaluation of the Harbors of Subic Bay and Manila, Republic of the Philippines, as Typhoon Havens -- J. Douglass -- 115 pp
TP 14-75	A-011-818	May 1975	Classification and Analysis/Forecasting of Near-Surface Ocean Thermal Structure -- T. Laevastu -- 34 pp
TP 15-75	A-012-348	Jun 1975	An Evaluation of the Harbor of Yokosuka, Japan as a Typhoon Haven -- R. Graff -- 100 pp
TP 16-75	A-011-057	Mar 1975	Tropical Cyclone Genesis in the Western North Pacific -- W. Gray (Colorado State Univ.) -- 66 pp
TP 17-75	A-014-100	Jul 1975	An Evaluation of Sasebo Harbor, Japan as a Typhoon Haven -- D. Rudolph -- 115 pp
TP 18-75	A-020-304	Oct 1975	Island Barrier Effects on Sea State and Atmospheric Moisture as Detected by a Numerical Wave Model and Sensors of the Defense Meteorological Satellite Program (DMSP) -- R. Fett, K. Rabe -- 67 pp
TP 19-75	A-018-847	Nov 1975	An Evaluation of Apra Harbor, Guam as a Typhoon Haven -- M. Brown, S. Brand -- 79 pp
TP 20-75	A-021-213	Nov 1975	Objective Analysis Technique in Sigma Coordinates -- D. Schiessl -- 152 pp
TP 21-75	A-025-087	Dec 1975	An Evaluation of the Harbors of Buckner Bay and Naha, Okinawa as Typhoon Havens -- D. Rudolph, F. Blake, S. Brand, J. Bleloch -- 90 pp
TP 22-75	A-019-307	Dec 1975	An Evaluation of the Harbors of Inchon, Pusan and Chinhae, Republic of Korea, as Typhoon Havens -- D. Rudolph -- 130 pp

Report Number	AD Number	Report Date	Title -- Author(s) -- Pages
TP 23-75	A-019-312	Dec 1975	An Evaluation of the Harbors of Kwakuni and Kure, Japan as Typhoon Havens -- J. Manning -- 82 pp
TP 24-75	A-020-640	Dec 1975	An Evaluation of the Numazu Operating Area and Kagoshima Harbor, Japan as Typhoon Haven -- R. Wixom -- 125 pp
TN 17	A-008-156	Feb 1975	Surface Currents Deduced from Ship Drift at the Periphery of Costa Rica Dome -- T. Laevastu -- 7 pp
TN 18	A-010-234	Mar 1975	An Evaluation of Available Wave Refraction Models for Use on the CDC 3100 Computer -- K. Rabe -- 30 pp
TN 19	A-010-546	Apr 1975	Puerto Rico Operating Area Search and Rescue Program - USAR -- K. Rabe -- 60 pp
TN 20*	A-010-791	Apr 1975	Direct Solution of Elliptic Equations by Block Cyclic Reduction and Factorization -- T. Rosmond, F. Faulkner -- 34 pp
TN 21	A-013-192	Jun 1975	NVA Upper Air Temperature and Wind Analysis for a 12-Level European Area Model -- A. Groll -- 53 pp
TN 22*	A-014-083	Aug 1975	Interrelationships between Tropical North Pacific Atmospheric Circulation, Explosive Volcanism, Sea Surface Temperature and Western North Pacific Tropical Storms and Typhoons -- J. Harding, S. Larson -- 25 pp
TN 23	---	---	Unpublished
CPN 20	A-020-045	May 1975	A Cloud Advection Model -- R. Nagle -- 113 pp
CPN 21	A-008-841	Mar 1975	The Delaware-Dobson Wave Refraction Model -- K. Rabe -- 47 pp
CPN 22	A-013-191	Mar 1975	Subroutines for Direct Solution of Three-Dimensional Elliptic Equations -- T. Rosmond -- 39 pp
CPN 23*	A-013-190	Apr 1975	Subroutines for the Direct Solution of Two-Dimensional Elliptic Equations -- T. Rosmond -- 32 pp

Report Number	AD Number	Report Date	Title -- Author(s) -- Pages
TR 1-75	---	---	Unpublished
TR 2-75 (CSC)	A-010-232	Apr 1975	Feasibility Study of a Quadrilateralized Spherical Cube Earth Data Base -- F. Chan, E. O'Neill (Computer Sciences Corporation) -- 114 pp
TR 3-75 (ESC)	A-010-541	Feb 1975	Sea Surface Wind Speed Estimates from the NIMBUS 5 ESMR -- R. Sabatini (Earth Satellite Corporation) -- 55 pp
TR 4-75*	---	Feb 1975	Techniques for Processing VTPR Side-Scan Radiances Including Diagnosis for the Clear-Column Radiance Components -- M. Holl (Meteorology International Incorporated) -- 93 pp plus Appendix A
TR 5-75* (UD)	A-014-320	May 1975	Interpretation of Structures Over Oceanic Regions in DMSP Data -- K. Szekielda (University of Delaware) -- 41 pp
TR 6-75 (ESC)	A-009-850	Apr 1975	Applications of the NIMBUS 5 ESMR to Rainfall Detection Over the Oceans and to Sea-Ice Detection -- R. Sabatini, D. Hlavka, R. Arcese (Earth Satellite Corporation) -- 77 pp
TR 7-75*	A-014-427	May 1975	Mapping of Sea Surface Temperature by the DMSP Satellite -- J. Cogan, J. Willard (Environmental Research & Technology, Inc.) -- 82 pp
TR 8-75 (SRI)	A-021-173	Oct 1975	Correlation of Cloud Brightness and Radiance with Precipitation Intensity -- R. Blackmer (Stanford Research Institute) -- 134 pp
TR 9-75 (SRI)	A-021-772	Oct 1975	Implementation of the SRI Objective Cloud Tracking System at EPRE -- D. Hall, D. Wolf (Stanford Research Institute) -- 62 pp
TR 10-75 (SRI)	A-020-689	Oct 1975	Use of Infrared Radiance Measurements in Dynamic Analysis -- P. Davis (Stanford Research Institute) -- 76 pp

Report Number	AD Number	Report Date	Title -- Author(s) -- Pages
TR 11-75*	A-022-650	Oct 1975	Objective Tropical Storm Parameters from Satellite Cloud Patterns -- D. Dartt (Control Data Corporation) -- 23 pp + Figures
TR 12-75 (MII)	A-023-908	Dec 1975	Tests and Evaluations of CLRX, the Diagnosis of Clear Column Radiances -- M. Holl (Meteorology International Incorporated) -- 109 pp
TR 13-75* (ODSI)	A-024-736	Nov 1975	Data Assimilation Restorative-Iterative Model (RIMOD) -- P. Kesel, R. Welck (Ocean Data Systems, Inc.) -- 154 pp
TP 1-76	A-023-676	Mar 1976	A Tropical Cyclone Analog Program for the Southwest Pacific Ocean and Australian Region -- S. Brand, J. Bleloch -- 23 pp
TP 2-76	A-025-456	Feb 1976	Tropical Cyclone Initiation by the Tropical Upper Tropospheric Trough -- J. Sadler (University of Hawaii) -- 104 pp
TP 3-76	A-027-533	May 1976	An Evaluation of the Harbor of Cebu, Republic of the Philippines, as a Typhoon Haven -- B. Hassell -- 74 pp
TP 4-76	A-027-532	May 1976	Cross-Equatorial Interactions in the Development of a Winter Typhoon: Nancy 1970 -- C. Guard (University of Hawaii) -- 46 pp
TP 5-76	A-034-188	Jun 1976	Typhoon Havens Handbook for the Western Pacific and Indian Oceans -- S. Brand, J. Bleloch -- 256 pp
TP 6-76	A-027-410	May 1976	Clearing Fog by Seeding with Charged Water Drops: A Numerical Study -- P. Tag -- 49 pp
TP 7-76	A-031-174	Jul 1976	The Climatology and Forecasting of Eastern North Pacific Ocean Tropical Cyclones -- R. Renard, W. Bowman -- 79 pp
TP 8-76	A-029-717	Aug 1976	A Wind Wave Tropical Cyclone Model for the Western North Pacific Ocean -- S. Brand, K. Rabe, T. Laevastu -- 21 pp

Report Number	AD Number	Report Date	Title -- Author(s) -- Pages
TN 24	A-021-638	Feb 1976	A Generalized Version of the Fields by Information Blending (FIB) Technique -- B. Maxwell -- 86 pp
CPN 24	A-037-226	Jan 1976	Calibration, Earth Location and Mapping Programs for the NIMBUS-5 Electronically Scanning Microwave Radiometer (ESMR) -- R. Nagle -- 134 pp
TR 1-76 (SRI)	---	Dec 1975	Analysis of Radio-Radar Propagation Conditions Using Satellite-Viewed Cloud Cover and Rawinsonde Observations -- R. Blackmer (Stanford Research Institute) -- 62 pp
TR 2-76* (CDC)	A-027-412	Jan 1976	A Pilot Analysis of the Curvature of Extratropical Storms -- D. Dartt (Control Data Corporation) -- 21 pp + Figures
TR 3-76 (CSC)	A-026-294	May 1976	Extended Studies of a Quadrilateralized Spherical Cube Earth Data Base Base -- E. O'Neill, R. Laubscher (Computer Sciences Corporation) -- 114 pp
TR 4-76 (MII)	A-034-291	Jan 1976	Development of the Capability for Surface-Wind Analysis on a Portable Grid (FIB/UV-PORT) -- B. Mendenhall (Meteorology International Incorporated) -- 40 pp + Appendices A and B
TR 5-76*	---	Mar 1976	Program Development for Reduction of Meteorological Satellite Data to Vertical Temperature and Humidity Profiles -- (Ocean Data Systems, Inc.) -- I, 197 pp; II, 332 pp
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Report Number	AD Number	Report Date	Title -- Author(s) -- Pages
CR 87-07	--	Apr 1987	Determining Large Scale Tendency Terms for the Navy Over-Water Local Atmospheric Prediction System (NOWLAPS) -- P. Ardanuy, L. Penn -- 69 pp
CR 87-08	--	Apr 1987	Determining Large Scale Tendency Terms for NOWLAPS: Users Guide -- L. Penn, P. Ardanuy -- 25 pp
CR 87-09	--	Apr 1987	Tropical Cyclone Readiness Conditions Setting Aids -- J. Jarrell -- 62 pp
CR 87-10	--	Jun 1987	Recent Colorado State University Tropical Cyclone Research of Interest to Forecasters -- W. Gray -- 116 pp
CR 87-11	--		unpublished
CR 87-12	(printing delayed to 1988)	Jun 1987	Forecasters Handbook for Japan and Adjacent Sea Areas -- R. Englebretson, R. Gilmore -- 571 pp
CR 87-13	Printing		Severe Weather Guide, Mediterranean Ports:
CR 87-14	of these		7. Marseille -- 79 pp
CR 87-15	nine port		8. Toulon -- 71 pp
CR 87-16	studies		9. Villefranche -- 65 pp
CR 87-17	delayed		10. Malaga -- 61 pp
CR 87-18	to 1988		11. Nice -- 49 pp
CR 87-19			12. Cannes -- 53 pp
CR 87-20			13. Monaco -- 53 pp
CR 87-21			14. Ashdod -- 67 pp
			15. Haifa -- 68 pp

## ABSTRACTS OF 1987 PUBLICATIONS

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TR 87-01, July 1987: Meteorological Radar and Its Usage in the Navy -- Dr. L. Hembree, Jr. -- 67 pp.

The basic principles of radar meteorology are presented along with the current capabilities of meteorological radars. Factors that need to be examined when evaluating a radar for meteorological applications are also discussed. The current use of radars for meteorological measurements within the Navy is presented along with possible future applications. It is concluded that Doppler meteorological radar data could have a significant impact on Naval operations. It is recommended that the replacement for the FPS-106 have Doppler capability with at least intensity and velocity displays. It is further recommended that the radar have the capacity to apply various application algorithms to the data. The ability to process weather information should be added to suitable afloat tactical radars.

TR 87-02, August 1987: Summary of Environmental Effects on Sensors and Communications Systems -- J. Cook, S. Payne -- 22 pp. (Distribution authorized to U.S. Government agencies only; see listing on p. 31.)

(Abstract: same distribution as report)

TR 87-03, December 1987: High Energy Laser Propagation Predictions Using Model Atmospheres and Observed Data -- J. Haggerty -- 26 pp. (Distribution authorized to U.S. Government agencies and their contractors only; see listing on p. 31.)

(Abstract: same distribution as report)

TR 87-04, December 1987: Temperature Profile Construction Methods: An Evaluation -- W. Thompson -- 66 pp.

A method for obtaining atmospheric temperature profiles in data sparse areas is to extract temperature from numerical weather prediction model analysis fields at mandatory levels. An important component of this technique is the near surface air temperature, which can be obtained either from the numerical model's extrapolated mean planetary boundary layer temperature or from an analysis of the observations. In an effort to determine which of these two values gives the most representative profile, comparisons were made between profiles constructed from Fleet Numerical Oceanography Center (FNOC) fields and ship soundings from weather station ships in the North Atlantic. Although both profiles compared favorably to the soundings in many cases, the analysis field provided more representative estimates of atmospheric stability than the model-derived near surface air temperature.

TR 87-05, December 1987: The Surface Evaporative Duct Height Product:  
An Evaluation -- W. Thompson -- 55 pp.

The global surface evaporative duct (SED) height field is produced operationally at the Fleet Numerical Oceanography Center (FNOC) by the global surface contact layer interface (GSCLI) model. An evaluation of the quality of the product and an analysis of the GSCLI SED algorithm were conducted. Results indicate that there is a considerable geographical bias in the quality of the product. The expression used to compute duct height contains several simplifications and produces unrealistic values for duct height under certain conditions. It is recommended that a different expression be adopted for duct height determination when the surface layer is stable.

CR 87-01 through -06 and CR 87-13 through -21 (printing delayed to 1988): Severe Weather Guide, Mediterranean Ports -- fifteen port studies publications in the series to date, as follows:

1. Gaeta -- 64 pp (CR 87-01)	9. Villefranche -- 65 pp (CR 87-15)
2. Naples -- 78 pp (-02)	10. Malaga 61 pp (-16)
3. Catania 56 pp (-03)	11. Nice -- 49 pp (-17)
4. Augusta Bay -- 60 pp (-04)	12. Cannes -- 53 pp (-18)
5. Cagliari -- 56 pp (-05)	13. Monaco -- 53 pp (-19)
6. La Maddalena -- 66 pp (-06)	14. Ashdod -- 67 pp (-20)
7. Marseille -- 79 pp (-13)	15. Haifa -- 68 pp (-21)
8. Toulon -- 71 pp (-14)	

Common Abstract:

This handbook for the port of ((name of port)), one in a series of severe weather guides for Mediterranean ports, provides decision-making guidance for ship captains whose vessels are threatened by actual or forecast strong winds, high seas, restricted visibility or thunderstorms in the vicinity. Causes and effects of such hazardous conditions are discussed. Precautionary or evasive actions are suggested for various vessel situations. The handbook is organized in four sections for ready reference: general guidance on handbook content and use; a quick-look captain's summary; a more detailed review of general information on environmental conditions; and an appendix that provides oceanographic information.

CR 87-07, April 1987: Determining Large Scale Tendency Terms for the Navy Over-Water Local Atmospheric Prediction System (NOWLAPS) -- P. Ardanuy, L. Penn -- 69 pp.

A manual method for calculating large scale tendency (LST) terms for the Navy Over-Water Local Atmospheric Prediction system (NOWLAPS) is adapted from an automated, central-site method utilizing forecast fields from the Navy Operational Global Atmospheric Prediction System (NOGAPS). This report describes the design and use of the LST terms, and compares NOWLAPS predictions for an oceanic weather station ship to those of the Navy Operational Local Atmospheric Prediction System (NOLAPS) and persistence. NOWLAPS, a one-dimensional planetary boundary layer (PBL) model, is designed primarily for shipboard use and was adapted to the Hewlett-Packard 9845 computer under a previous contract. Although it can be run as a single-station PBL forecast model, NOWLAPS can not be a competitive forecast tool until horizontal advection is included or parameterized.

CR 87-08, April 1987: Determining Large Scale Tendency Terms for NOWLAPS: Users Guide -- P. Ardanuy, L. Penn -- 25 pp.

Procedures are described for manually computing the large scale tendency (LST) terms for NOWLAPS, a one-dimensional planetary boundary layer model designed for shipboard use. A description of the design and testing of the LST method is provided in NAVENVPREDRSCHFAC Contractor Report CR 87-07, Determining Large Scale Tendency Terms for the Navy Over-Water Local Atmospheric Prediction System (NOWLAPS).

CR 87-09, April 1987: Tropical Cyclone Readiness Conditions Setting Aids -- J. Jarrell -- 62 pp.

A procedure to set tropical cyclone readiness conditions with a high degree of reliability is described. Where possible, threshold values for 90% and/or 95% confidence are given for 50 kt tropical cyclone and typhoon (hurricane) readiness conditions. The methodology used a large number of computer-simulated forecasts for actual typhoons (hurricanes) that passed near Yokosuka, Buckner Bay, Apra Harbor, Cubi Point, or Pearl Harbor. Wind probabilities were computed from these forecasts assuming present-day forecast error characteristics, and were compared to estimates of actual winds. These data were used to establish tropical cyclone condition thresholds at desired levels of confidence as related to wind probability.

CR 87-10, June 1987: Recent Colorado State University Tropical Cyclone Research of Interest to Forecasters -- W. Gray -- 116 pp.

This report discusses new tropical cyclone research being conducted at Colorado State University, research which may be used as background information by tropical cyclone forecasters. Observational findings and speculations from a recent research project are presented, addressing: (1) various climatological characteristics of tropical cyclones; (2) tropical cyclone formation; (3) tropical cyclone structural variability; (4) tropical cyclone intensity change; and (5) tropical cyclone outer radius wind distribution.

CR 87-11 - unpublished

CR 87-12 (printing delayed to 1988): Forecasters Handbook for Japan and Adjacent Sea Areas -- R. Englebretson, R. Gilmore -- 571 pp.

Weather conditions for the Sea of Japan, East China Sea, Yellow Sea, Sea of Okhotsk, Philippine Sea and western North Pacific Ocean (W of 160 deg E) are examined. Each of these regions is addressed separately with information directed toward operational forecasters. A general overview chapter provides seasonal climatology charts for the entire area. In most cases, satellite imagery examples are included in discussions of particular weather conditions. These examples provide references for various seasonal atmospheric and oceanic synoptic scale features. Also included are numerous forecast rules that have direct application to naval operational planning. Appendices provide information on local geographic terminology, tropical cyclones, and superstructure icing.

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